

DOCKET FILE COPY ORIGINAL

RECEIVED  
June 1993

JUL - 7 1993

Before the Federal Communications Commission  
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter Of  
Amendment of the Marine Service Rules (Part 80)  
and Aviation Services Rules (Part 87) to require  
registration of 406 MHz radiobeacons.

RM 8008

COMMENTS OF SARSAT OPERATIONS DIVISION  
OF THE  
NATIONAL ENVIRONMENTAL SATELLITE, DATA,  
AND INFORMATION SERVICE (NESDIS)  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

The National Oceanic and Atmospheric Administration (NOAA), through the SARSAT Operations Division of NESDIS, as the U.S. Agency responsible for operational control of the SARSAT satellites, provides its comments for the subject rule making.

I. GENERAL COMMENTS

NOAA endorses the proposed FCC rule making to require registration of 406 MHz radiobeacons carried by the aviation and maritime communities. NOAA has recently petitioned the FCC for authorization to use the 406 MHz frequency band for Personal Locator Beacons (PLBs); we also propose that mandatory registration apply to 406 MHz PLBs should they come into use.

NOAA serves as the lead agency in the U.S. Interagency Program Steering Group (PSG) which brings together all of the federal agencies having a direct responsibility to operate and utilize the COSPAS-SARSAT satellite system. NOAA also is the U.S. representative to the international COSPAS-SARSAT Council (CSC). NOAA is responsible for the U.S. portion of the SARSAT space segment as well as the provision and operation of the ground segment including the Mission Control Center (MCC), the ground stations (Local User Terminals) and the associated communications and test facilities.

II. BENEFITS OF REGISTRATION

(1) The SAR effectiveness of the 406 MHz radiobeacon is directly related to the availability of information on the identity of the beacon and the use of telephone points of contact to verify the distress and gain information on the estimated location of the distress incident. Beacon registration is essential for realizing the full benefit from the 406 MHz

No. of Copies rec'd  
List ABCDE

018

(2) The identification information provided in beacon registration allows SAR forces to effectively dispose of non-distress beacon activations without expending resources, and to more efficiently prosecute real distress incidents. It is also an obvious deterrent to using distress beacons in an unlawful manner.

(3) Activation of a non-registered beacon in a non-distress situation invokes the same reaction from SAR forces as that intended for real distresses. Armed with registration information, however, SAR authorities have the opportunity to evaluate the situation by telephone, arrange for the beacon to be turned off, and avoid the necessity of launching SAR resources. Equipment and personnel that otherwise would be occupied in searching for the beacon are saved for real alerts.

(4) The registration data, along with information available from the emergency contact, enables the SAR forces reacting to a real distress to be prepared for what they will find at the scene and to carry out the mission efficiently.

(5) A 406 MHz detection from geostationary orbit has been demonstrated and is in limited use today using experimental equipment on the GOES-7 satellite. NOAA is implementing this capability on the next generation of geostationary environmental satellites to be launched starting in 1994. Geostationary alerts can be received immediately upon activation of a beacon, but unlike the low orbit COPAS-SARSAT System, the geostationary satellite system cannot provide locations. When registration information is available from a geostationary alert, it will often be possible to determine quickly the approximate location of the distress, thus enabling SAR forces in the correct region to prepare for a mission without delay. Without registration information, on the other hand, no action can be taken until low orbit data is available. This time saving alone could be up to 2 hours, thereby significantly increasing the probability that lives will be saved.

### III. EXPERIENCE WITH USE OF REGISTRATION DATA

(1) The experience of the U.S. Coast Guard in the maritime area with 406 MHz EPIRBs has demonstrated the effectiveness of the 406 MHz EPIRB as a lifesaving tool, while at the same time the 406 MHz system has shown its advantages in mitigating false alarms. When the EPIRB is not registered in the NOAA database the Coast Guard has launched a mission 80% of the time to resolve the false alarm whereas 82% of the 406 MHz false alarms are being handled without launching a rescue mission when the EPIRB is registered in the database.

(2) The use of a unique digital code in the beacon transmission have been demonstrated to eliminate the "false alerts" generated on the 121.5 MHz frequency by noise and other sources of interference. Approximately 400 "false alerts" are

generated each day from the 121.5/243 MHz satellite system. The 406 MHz satellite system will not recognize or generate a distress location unless the correct code is contained in the transmission.

(3) The coding scheme that has been agreed to internationally by the COSPAS-SARSAT partners and CCIR allows for a number of identification protocols which will provide the optimum cost effective use of identification tailored to each user community. The NOAA ground system will provide maintenance of the 406.025 MHz database to insure effective use of this feature.

(4) Experience in Canada with PLB registration has shown that a point-of-sale registration is an effective tool to obtain registration information.

#### IV. OTHER COMMENTS

(1) At its best, voluntary registration will result in 25 to 40% of 406 MHz distress cases to be handled as "unknown origin" resulting in loss of time in real distress incidents and

